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Some technical problems of oil well drilling.

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Several aspects of the problems caused by the increasing depth of oil wells are discussed.

These problems include : The computation of rods under their own weight (formula 1), the torsion moment of rods under tension and rotation stress (formula 2), the lining required to keep up the well, the diameter of the well in relation to the diameter of the column and the length of the shaft without pipes (formula 3), the resistance of the column under biaxial stress of the exterior pressure and its own weight (formula 4) and drilling equipment capable of withstanding the weight of the rods and of the columns at constantly increasing depths. Formula 6 is a formula obtained by chronometric measurement for determining the length of time of the introduction and removal operations of the rod assemblies.

Special attention has been given to the resistance of the columns . The computations for tubings of 5 3/4 ", 7", and 8 5/8" are shown in diagrams for a safety factor of 1.7 in solid ground, and 1.5 in less solid ground. For reinforced columns these factors can be reduced to 1.5 and 1.3 respectively.